



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 10/519,557 | 12/28/2004 | Oliver Moller | 262605US0X PCT | 2807 |
| 22850 | 7590 | 12/02/2005 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | WITHERSPOON, SIKARL A | |
| | | | ART UNIT | PAPER NUMBER |

1621

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/519,557

Applicant(s)

MOLLER ET AL.

Examiner

Sikarl A. Witherspoon

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/28/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Drago et al (US 5,012,008).

Drago et al disclose the hydroformylation of propylene in the presence of 0.08 grams of propylene carbonate and a rhodium catalyst to produce the corresponding aldehyde (example 1, col. 8, lines 1-15). This process anticipates the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 6-8, and 10-12, although not anticipated, are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago et al.

The instant claims limit the hydroformylation process of the present invention to the use of a cyclic carbonic ester of formula I having specific substituents, to the use of

Art Unit: 1621

a nonpolar solvent having a specific weight based on the reaction mixture, and the olefin employed coming from a first hydroformylation reaction.

Drago et al do not expressly teach these limitations; however, Drago et al do teach the hydroformylation of olefins having from 2 to 6 carbon atoms in the presence of a liganded rhodium catalyst, and substituted or unsubstituted organic esters, aromatic hydrocarbons, organic derivatives of oxygen, such as propylene carbonate, etc., (col.4, line 52 to col. 6, line 55).

The examiner contends that it would have been obvious to a person of ordinary skill in the art, at the time the present invention was made, to employ as starting material, an olefinically unsaturated compound that has been recycled from the unreacted starting material of a first or previous hydroformylation or any other source of olefinic compound. The examiner further contends that it would have been obvious to a person of ordinary skill in the art to employ any amount of solvent that would remain inert to the hydroformylation reaction, and yet, allow for optimal conversion of the olefinic material to the hydroformylation product. It would also have been obvious to employ a substituted cyclic carbonic ester in the process taught by Drago et al, since the reference teaches that organic derivatives of oxygen, such as propylene carbonate, may be substituted; a person of ordinary skill would reasonably expect the substituted or unsubstituted compound to be effective in its purpose, i.e., dispersing the rhodium catalyst and maintaining it in amorphous phase on the support material (col. 6, lines 34-55).

Art Unit: 1621

Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago et al as applied to claims 2-4, 6-8, and 10-12 above, and further in view of Maher et al (WO 87/07261).

The instant claims limit the solvent used in the process of the present invention to substituted or unsubstituted hydrocarbons having from 10 to 50 carbon atoms, or olefins having from 3 to 24 carbon atoms.

Maher et al teach a hydroformylation reaction using a rhodium-containing catalyst in the presence of an organic polymer containing polar functional groups, including carbonates, in the presence of a solvent such as Texanol, a substituted hydrocarbon having at least 10 carbon atoms (p 32).

It would have been obvious to employ a solvent such as Texanol in the process of the instant invention, since Maher et al teach that said solvent can be used in hydroformylation processes that employ compounds such as carbonates, used to stabilize the rhodium catalyst.

The disclosure is objected to because of the following informalities: the specification does not contain a brief description of the drawings. Also, the initials found on figure 2 must be removed. Appropriate correction is required.

Art Unit: 1621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikarl A. Witherspoon whose telephone number is 571-272-0649. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

saw

Sikarl A. Witherspoon
SIKARL A. WITHERSPOON
PATENT EXAMINER



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

| APPL NO. | FILING OR 371 (c) DATE | ART UNIT | FIL FEE REC'D | ATTY. DOCKET NO | DRAWINGS | TOT CLMS | IND CLMS |
|------------|---------------------------|----------|---------------|-----------------|----------|----------|----------|
| 10/519,557 | 12/28/2004 | 1621 | 900 | 262605US0X PCT | 2 | 13 | 1 |

22850
 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
 1940 DUKE STREET
 ALEXANDRIA, VA 22314

CONFIRMATION NO. 2807
CORRECTED FILING RECEIPT
OC000000017542823
 OC000000017542823

Date Mailed: 11/29/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Oliver Moller, Recklinghausen, GERMANY;
 Klaus-Diether Wiese, Haltern am See, GERMANY;
 Dieter Hess, Marl, GERMANY;
 Cornelia Borgmann, Frankfurt, GERMANY;
 Alfred Kaizik, Marl, GERMANY;
 Dirk Fridag, Haltern am See, GERMANY;

Assignment For Published Patent Application

oxeno olefinchemie gmbh, marl, GERMANY

Power of Attorney: The patent practitioners associated with Customer Number 22850.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/EP03/08737 08/07/2003

Foreign Applications

GERMANY 102 40 253.1 08/31/2002
 GERMANY 103 27 435.9 06/18/2003

If Required, Foreign Filing License Granted: 11/29/2005

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/519,557**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

Method for producing aldehydes by means of hydroformylation of olefinically unsaturated compounds, said hydroformylation being catalyzed by unmodified metal complexes in the presence of cyclic carbonic acid esters

Preliminary Class

568

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).